

CLAIMS

1. A gang-type rotary lawn mower comprising
a frame supported by wheels for movement over the ground,
a power source which is mounted on the frame and which
drives at least two of the wheels,
an operator's seat mounted on the frame,
a steering system enabling the operator to steer the lawn
mower,
at least two side-by-side front rotary cutting deck
assemblies mounted on the frame, the front deck assemblies
defining a gap between adjacent front deck assemblies, and
at least one rear rotary cutting deck assembly mounted on
the frame behind the front deck assemblies, each rear deck
assembly being aligned with a respective gap between adjacent
front deck assemblies,
each of the front and rear deck assemblies including a
single-spindle cutting deck defining a downwardly opening space,
a single spindle mounted for rotation about a generally vertical
axis within the space, and at least one cutting blade mounted on
the spindle for rotation therewith.

2. A lawn mower as set forth in claim 1 wherein the front
deck assemblies are mounted on the frame in front of the front
wheels, and the rear deck assembly is mounted on the frame behind
the front wheels and in front of the rear wheels.

3. A lawn mower as set forth in claim 1 wherein each deck assembly also includes a rear roller supporting the associated deck for movement over the ground, and wherein the deck has a width such that the roller extends across substantially the entire width of the deck.

4. A lawn mower as set forth in claim 3 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable.

5. A lawn mower as set forth in claim 1 wherein each deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivingly connected to the spindle.

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6. A lawn mower as set forth in claim 1 wherein each deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

7. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates of the associated deck assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of the cross member ends being connected to the other of the side plates of the associated deck assembly for pivotal movement about the generally horizontal, laterally-extending axis.

8. A lawn mower as set forth in claim 7 wherein each of the deck assemblies is connected to the frame by a respective generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

9. A lawn mower as set forth in claim 8 wherein the arm is operable to lift the associated deck assembly relative to the frame.

10. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.

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11. A rotary lawn mower comprising
a frame supported by wheels for movement over the ground,
a power source which is mounted on the frame and which
drives at least two of the wheels,
an operator's seat mounted on the frame,
a steering system enabling the operator to steer the lawn
mower, and
a rotary cutting deck assembly including a pair of
laterally-spaced, generally vertically-extending side plates
which have forward ends and which are supported for movement over
the ground, a single-spindle cutting deck defining a downwardly
opening space, the deck being located between the side plates and
being mounted on the side plates such that the height of the deck
relative to the ground is adjustable, a single spindle mounted
for rotation about a generally vertical axis within the space,
and at least one cutting blade mounted on the spindle for
rotation therewith, the deck assembly being connected to the
frame by a cross member connected to the frame for pivotal
movement about a generally vertical axis and about a generally
horizontal axis extending in the forward-rearward direction, the
cross member having opposite, laterally-spaced ends, one of the
cross member ends being connected to one of the side plates for
pivotal movement about a generally horizontal, laterally-
extending axis adjacent the forward ends of the side plates, and
the other of the cross member ends being connected to the other

the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

12. A lawn mower as set forth in claim 11 wherein the deck assembly is connected to the frame by a generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

13. A lawn mower as set forth in claim 12 wherein the arm is operable to lift the deck assembly relative to the frame.

14. A lawn mower as set forth in claim 11 wherein the deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivingly connected to the spindle.

15. A lawn mower as set forth in claim 11 wherein the deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

16. A lawn mower as set forth in claim 11 wherein the deck assembly also includes a first front wheel supporting one of the side plates for movement over the ground, a second front wheel supporting the other of the side plates for movement over the ground, and a rear roller extending between the side plates and supporting the side plates for movement over the ground, wherein the deck is located in front of the roller, and wherein the deck has a width such that the roller extends across substantially the entire width of the deck.

17. A lawn mower as set forth in claim 11 wherein the ends of the cross member have thereon respective downwardly extending arms, the arms having respective lower ends, the lower end of one of the arms being connected to one of the side plates for pivotal movement about the generally horizontal, laterally-extending axis, and the lower end of the other of the arms being connected to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

18. A gang-type rotary lawn mower comprising
a frame,
a pair of front wheels supporting the frame for movement
over the ground,
a pair of rear wheels supporting the frame for movement over
the ground,
a power source which is mounted on the frame and which
drives at least one of the pairs of wheels,
an operator's seat mounted on the frame,
a steering system enabling the operator to steer the lawn
mower,
at least two side-by-side front rotary cutting deck
assemblies mounted on the frame in front of the front wheels, the
front deck assemblies defining a gap between adjacent front deck
assemblies, and
at least one rear rotary cutting deck assembly mounted on
the frame behind the front wheels and in front of the rear
wheels, each rear deck assembly being aligned with a respective
gap between adjacent front deck assemblies,
each of the front and rear deck assemblies including a pair
of laterally-spaced, generally vertically-extending side plates
having forward ends, a first front wheel supporting one of the
side plates for movement over the ground, a second front wheel
supporting the other of the side plates for movement over the
ground, a rear roller extending between the side plates and
supporting the side plates for movement over the ground, a

single-spindle cutting deck defining a downwardly opening space, the deck being located between the side plates and in front of the roller and being mounted on the side plates such that the height of the deck relative to the ground is adjustable, the deck having a width such that the roller extends across substantially the entire width of the deck, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and

each of the deck assemblies being connected to the frame by a respective generally L-shaped, horizontally-extending lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame, each arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and each arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and a cross member mounted on the outer end of the outer leg for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates of the associated deck assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of

the cross member ends being connected to the other of the side plates of the associated deck assembly for pivotal movement about the generally horizontal, laterally-extending axis.

19. A lawn mower as set forth in claim 18 wherein each deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivingly connected to the spindle.

20. A lawn mower as set forth in claim 18 wherein each deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

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